

of instruments. It is moreover capable of measurement by Weber's compasses and may even be photographed if desirable in a given case.

Another objective symptom of pain on pressure is the marked variation in vasomotor reaction which often follows, and is manifest, particularly when the painful area is in the head, by flushing of the face. The very evident increase in the respiratory movements which sometimes follows manipulation of the painful part is also a sign of no small importance.

In the cases where hemianesthesia is present, the skin reflexes are often diminished on this side, and one is enabled to make important comparisons between the reaction of the pulse, pupils and respiration to painful stimulation on the anesthetic and the sound sides. Hemianesthesia in traumatic as well as in ordinary hysterical cases is accompanied, as a rule, by spasm of the peripheral vessels, whereby differences in body temperature on the two sides, as well as differences in the cutaneous vasomotor reactions, are often to be made out.

If all these methods of examination are carefully pursued, v. Bechterew believes that the necessity of relying upon a patient's statements with regard to pain may be largely eliminated in that important class of cases which involve litigation.

J. W. COURTNEY.

82 UNUSUAL GUNSHOT WOUND OF BRAIN. Barker (Lancet, Dec. 2, 1899).

The author reports a case in which a man, with suicidal intent, discharged two shots from a revolver through his mouth upward and backward. For forty-eight days there was occasional vomiting. There was at first no paralysis, but later the power in the left arm and leg was considerably reduced. The temperature was at no time over 100° F. Consciousness was not at any time suspended. After six weeks the vomiting ceased, the slight headache of which he had complained disappeared and the power of the left arm and leg increased so that he was soon able to walk. Both bullets were shown by skiagraphs to lie within the skull. Making due allowance for the different size of the shadows and that of the man's head, the operator's calculations led him to the conclusion that one of the bullets struck against the vertex and fell backward into the median fissure. In describing the effect of the shot, the patient said that he felt the bullet rattle against the vertex. As long as the presence of the bullet caused no serious symptoms Barker concluded that it was best to leave it alone, but on the sixty-sixth day the patient had a convulsive seizure lasting from three to five minutes. Two days later he had a similar attack, and an hour after the second a third; on the following day he had a fourth. On the following day an osteoplastic flap was sawed out and turned back with the base toward the middle line, thus exposing the longitudinal sinus without injuring it. A probe passed along the fissure in the direction in which the bullet was supposed to lie touched the bullet, and it was removed with forceps under the guidance of the little finger. The finger acted better than the probe, as during a coughing spell the latter produced slight injuries to several vessels and to the brain substance. There was, however, very little bleeding. The dura was stitched in place as far as possible and the osteoplastic flap replaced. Consciousness returned rapidly, but sensation and motion were absent from the whole left side, with the exception of the face. They returned slowly, and a month after operation, while there was fairly good sensation, the use of the left arm and leg was still very imperfect. Afterward the power of the muscles greatly improved, but the epileptic fits recurred so that a year after the injury, Chipault, of Paris,

trephined and separated some adhesions between the two hemispheres. For nine days prior to this operation there were from sixty to one hundred epileptic seizures in a day, with complete hemiplegia. After the operation the epileptic attacks disappeared and there was a steady gain in power in the left leg and arm.

JELLIFFE.

PATHOLOGY.

- 83 HEMIANOPSIE AUF EINEM AUGE MIT GERUCHSHALLUCINATIONEN (Hemianopsia of One Eye with Hallucinations of Smell). Max Linde (Monatsschrift für Psychiatrie und Neurologie, 7, 1900, p. 44).

The symptoms observed in this case were failure of memory, complete loss of sense of smell, right abducens paresis, loss of the outer half of the right visual field for white and colors, with preservation of the fixation point (the visual field of the left eye was normal), presence of Wernicke's hemianopsic pupillary reaction sign—reaction of the pupil of the right eye only when light was thrown on the right half of the retina, the pupillary reaction in the left eye being normal—deviation of the tongue to the right in extension, later bilateral choked disk, hallucinations of smell, etc. The left hippocampal gyrus and uncus were enlarged and hard on account of a tumor within them, and the right abducens was much atrophied, and the left optic tract was three times the normal size from tumor masses contained within it. The inner part of the right optic nerve was stained black by the Marchi method. In the chiasm the crossed right optic bundle, both dorsal and ventral portions according to Henschen's diagram, was degenerated. The degeneration was due to the tumor masses within the left optic tract. This is supposed to be the first recorded case of unilateral hemianopsia from cerebral tumor with necropsy.

SPILLER.

- 84 EXPERIMENTELLE BEITRÄGE ZUR PATHOLOGIE DES RÜCKENMARKS (Pathology of Spinal Cord after Embolus). Hoche (Arch. f. Psych. 32, p. 251-975).

In order to get a clearer idea of the results of inflammations and softenings of the spinal cord, the author conducted experiments on animals with that end in view. He describes his failure with injections made in the carotids, as the animals died very soon after of general arterial embolus. Therefore he was compelled to resort to Lamy's scheme, in which he made the injections by means of a catheter passed through the temporal artery into the abdominal aorta. The aorta was compressed both above and below the end of the catheter (laparotomy was resorted to for this) while the injection was made, and thus he was enabled to obtain purely dorsal and lumbar emboli in the spinal cord. The substances used for injection were all sterilized and of the following nature: Lycopodium, pollen of *Typha japonica*, maize, kamala, emulsion of castor oil and atmospheric air.

The examination of the blood system in the dog showed that his arteries were similar to those in man. The territory of the anterior median artery is smaller than in man, as a larger portion of the gray matter is supplied by the lateral arteries.

The pathological examination showed that the reaction of the arterial walls differed according to the cause of the embolus—lycopodium producing the least irritation, while to kamala was due the greatest. This reaction showed itself in a thickening of, and a small-celled infiltration in, the vessel walls. The arteritis was developed as early as the